Medical Physics Practice Guidelines

Furthering the goal of consistent practice standards in radiation oncology physics

Per Halvorsen, MS, DABR, FACR, FAAPM
Charlotte - July 2012

Outline

- How we got here:
  - AAPM's history of Task Group work & reports
  - ACR's history of Technical Standards & Practice Guidelines
  - Focus on medical errors and role of regulations
  - Requirements for clinic accreditation
  - Multiple accrediting entities
- Medical Physics Practice Guidelines
  - Vision and scope

AAPM Task Group history

- Significant volunteer activity by domain experts to develop technical reference documents
- Often developed by the “premier centers” in the country
- Task Groups’ purpose is not to define a minimum practice standard, but rather to create useful technical reference documents for practicing medical physicists
ACR documents

- Developed through a consensus-focused process with broad representation by different practice environments
- Aim to define a minimum practice standard
- Significant physician influence
- Devoid of much specificity

MIPPA

- Medicare Improvements for Patients and Providers Act of 2008:
  - Signed into law in July 2008
  - Requires practice accreditation for the “advanced imaging” modalities which includes CT, MR, and Nuclear Medicine
  - Does not include x-ray, fluoroscopy, sonography, or anything in radiation oncology
  - Does not apply to hospitals

Accrediting bodies under MIPPA:

- American College of Radiology
- Intersocietal Accreditation Commission
- The Joint Commission

The Problem/Concern

- All have different requirements for personnel - AAPM is on record indicating concern with not requiring board certification for medical physicists
ASTRO’s position:

Launching a significantly enhanced practice accreditation program and beginning the development of additional accreditation modules specifically addressing new advanced technologies such as IMRT, SBRT and brachytherapy.

ACR’s position:

The ACR believes Congress should expand the current MIPS accreditation requirements for advanced imaging to include radiation therapy. In addition, the accreditation mandate should apply to all facilities, including hospital settings. Furthermore, the accrediting of these imaging and radiation therapy procedures should only be conducted by those accrediting bodies with experience and expertise in the area for which they are accrediting.

ASTRO-AAPM:

Patient safety

Improving patient safety in radiation oncology

William R. Hendee PhD, Michael G. Herman PhD

*Medical College of Wisconsin, Racine, Wisconsin
Department of Radiation Oncology, Mayo Clinic, Rochester, Minnesota

Abstract. Beginning in the 1990s, and emphasized in 2000 with the release of the Institute of Medicine report, health care providers and industries have dedicated time and resources to reducing errors that impact safety and the quality of patient care. However, in January 2010, the Board of directors of the American Association of Physicists in Medicine (AAPM) took an active role in patient safety by issuing a call to action. The meeting attended nearly 200 attendees, including medical physicists, radiation oncologists, medical dosimetrists, radiation therapists, hospital administrators, regulators, and representatives of equipment manufacturers. The meeting was co-hosted by 14 organizations in the United States and Canada.

- Staffing levels
- FMEA
- Error reporting
- Accreditation
- Standardization
- Checklists
ASTRO White Papers

Safety considerations for IMRT: Executive summary
Jean M. Moran PhD,*,†, Natalie Dempsey MD,*, Jonaham Edir mưa MG,‡
Benedick A. Frazier PhD,*, James M. Gelva DG,‡, Geoffrey S. Blott PhD,*, Lawrence B. Marks MD

ASRT White Paper

Radiation Therapy Safety: The Critical Role of the Radiation Therapist

Possible result:
- Multitude of accrediting entities, each defining their own QC/safety standards
- State regulations continue to reference Task Group reports, which may be inappropriate for some practice environments
Proposed solution:

- AAPM develops practice guidelines for medical physics, defining a minimum practice standard for a given scope of clinical service.
- Accreditation programs (and state regulations?) incorporate the AAPM practice guidelines rather than defining their own.

Medical Physics Practice Guidelines

AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE
PROFESSIONAL POLICY:
PROCESS FOR CREATION, APPROVAL, AND REVISION OF MEDICAL PHYSICS PRACTICE GUIDELINES

INTRODUCTION
The American Association of Physicists in Medicine (AAPM) has long advocated a consistent level of medical physics practice and has published many guidelines and position statements toward that goal, such as Science Council Task Group reports related to calibrations and quality assurance, Education Council and Professional Council Task Group reports related to education, training, and past service, and Reshaped Program Content Statements related to the scope of practice, credentialing guidelines, and other aspects of education and training. In the past few years, as the profession has grown and matured, there has been a clear and concise statement of the acceptable practice standard for cancer care and the scope of practice. Medical Physics Practice Guidelines (MPPGs) will serve as the consistent, baseline, or minimum standard for accreditation programs. The AAPM will lead the development of MPPGs in collaboration with other professional societies. The MPPGs will be freely available to the general public. Accrediting organizations, regulatory agencies, and legislators will be encouraged to reference these.

TG reports vs MPPGs

TG reports are:

- Intended to be technical reference for medical physicists – compendia of the known science on a topic.
- Written by a core group of subject-matter experts.
- Reviewed by subject-matter committee and approved by one Council.
MPPG vision/scope

2. Vision

The AAPM will lead the development of MPPGs in collaboration with other professional societies. The MPPGs will be freely available to the general public. Accrediting organizations, regulatory agencies and legislators will be encouraged to reference these MPPGs when defining their respective requirements.

3. Scope

MPPGs are intended to provide the medical community with a clear description of the minimum level of medical physics support that the AAPM would consider prudent in all clinical practice settings. Support includes but is not limited to staffing, equipment, machine access, and training. These MPPGs are not designed to replace extensive Task Group reports or review articles, but rather to describe the recommended minimum level of medical physics support for specific clinical services.